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Claims:

1. An automated pharmaceutical dispensing system comprising means for selecting and retrieving a pharmaceutical pack, said means being arranged to deliver said pack to a labelling station, wherein said labelling station comprises a label printer arranged to print a label comprising information specific to a patient for whom said pharmaceutical pack is intended, and means for applying said label to said pack; the system further comprising means for delivering said pack from the labelling station so as to be accessible to a user.
2. A stock retrieval and labelling system comprising: means for retrieving an item of stock in accordance with an order therefor; means for printing a label for said item with information specific to said order; means for applying said label to said item; and control means in data communication with said stock retrieval means and said label applying means such that the control means is able to coordinate the retrieval of said item and application of the specific label thereto.
3. A system as claimed in claim 1 or 2 wherein the means for applying the label is adapted to alter the way in which the label is applied depending upon the dimensions of the pack to be labelled.
4. A system as claimed in claim 3 arranged such that the labelling station applies the label in an orientation relative to the pack which is dependent upon at least one dimension of the pack.
5. A system as claimed in claim 4 wherein the labelling station is arranged to orient the pack and label applicator appropriately.

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6. A system as claimed in claim 5 wherein the label applicator is arranged to adjust its orientation.
- 5 7. A system as claimed in any preceding claim wherein the label applicator is adapted to apply labels onto a pack in at least two discrete planes.
- 10 8. A system as claimed in any preceding claim wherein the labelling station is adapted to receive an instruction as to how the label is to be applied.
- 15 9. A system as claimed in any preceding claim wherein the label applicator is arranged to apply the label at a predetermined position on the pack, the position being variable from one pack type to another.
- 20 10. A system as claimed in any preceding claim arranged to pass information to the labelling station to enable the label applicator to apply the label in the predetermined position.
- 25 11. A system as claimed in any preceding claim arranged to pass label positioning information directly to the labelling station or label applicator.
12. A labelling apparatus comprising means for printing a label and means for applying said label to an object in at least two discrete planes.
- 30 13. A system as claimed in any preceding claim arranged to apply a label of common size to all packs.
- 35 14. A labelling station for applying a label to any of a plurality of different packs comprising means for determining at least one dimension of a pack to be labelled and means for applying a label to a pack in an orientation dependent upon said determined dimension.

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15. A labelling station as claimed in claim 14 wherein the label applicator is configured to be able to apply said label onto said pack in at least two discrete planes.

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16. A computer software product for enabling the automatic labelling of a pharmaceutical pack with patient-specific information, comprising means for processing a plurality of orders, each order comprising at least one piece of patient-specific information and a required drug, means for accessing a database referenced to said required drug for determining at least one dimension of a pack in which the drug is packaged, means for determining how to apply a label to said pack dependent on said pack dimension and means for giving instructions to a labelling station, said instructions including said patient-specific information and an instruction for determining how a label applicator is to apply a label to a pack.

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17. A software product as claimed in claim 16 wherein said instructions for determining how the label is to be applied comprise a code for determining an orientation in which the label is to be applied.

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18. A system for executing a computer software product as claimed in claim 16 or 17 comprising an existing pharmacy information technology system comprising a patient database, said information technology system generating a prescription request; a robot arm subsystem including an inventory database recording the position, size and entry date of each pharmaceutical pack as well as controlling movement of the robot arm; and a labelling subsystem which sits between said information technology system and said robot arm subsystem and controls the printing and application of labels.

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19. Software for execution on a server or plurality of servers, comprising means for receiving an order, said order comprising at least one piece of patient-specific information and a required drug, means for interrogating
5 a database referenced to said required drug and for receiving therefrom a determination relating to at least one dimension of a pack in which the drug is packaged, and means for giving instructions to a labelling station, said instructions including said patient-
10 specific information and information or instructions based on said pack dimension determination for determining how to apply a label to said pack.

20. A computer software product adapted, when run on
15 suitable data processing means, to receive a message indicating delivery of a pack to be labelled to a labelling station and to transmit a message to said labelling station for applying a label to said pack such that said software is able to coordinate the delivery of
20 said pack and the application of a particular label thereto.

21. A method of operating an automated pharmaceutical dispensing system selecting and retrieving a
25 pharmaceutical pack, delivering said pack to a labelling station, printing a label comprising information specific to a patient for whom said pharmaceutical pack is intended, applying said label to said pack; and delivering said pack from the labelling station so as to
30 be accessible to a user.

22. A method of retrieving and labelling stock comprising: retrieving an item of stock in accordance with an order therefor; printing a label for said item
35 with information specific to said order; applying said label to said item; including coordinating the retrieval of said item and application of the specific label

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thereto.

23. A method as claimed in claim 21 or 22 comprising
altering the way in which the label is applied depending
5 upon the dimensions of the pack being labelled.

24. A method as claimed in claim 24 comprising the
labelling station applying the label in an orientation
relative to the pack which is dependent upon at least
10 one dimension of the pack.

25. A method as claimed in claim 24 comprising the
labelling station orienting the pack and label
applicator appropriately.
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26. A method as claimed in claim 25 comprising the
label applicator adjusting its orientation.

27. A method as claimed in any of claims 21 to 26
20 comprising the label applicator applying a label onto a
pack in at least two discrete planes.

28. A method as claimed in any of claims 21 to 27
comprising the labelling station receiving an
25 instruction as to how the label is to be applied.

29. A method as claimed in any of claims 21 to 27
comprising the label applicator applying the label at a
predetermined position on the pack, the position being
30 variable from one pack type to another.

30. A system as claimed in any of claims 21 to 29
comprising passing information to the labelling station
to enable the label applicator to apply the label in the
35 predetermined position.

31. A method as claimed in any of claims 21 to 30

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comprising applying a label of common size to all packs.

32. A method of automatically labelling pharmaceutical pack with patient-specific information, comprising
5 processing a plurality of orders, each order comprising at least one piece of patient-specific information and a required drug, accessing a database referenced to said required drug for determining at least one dimension of a pack in which the drug is packaged, determining how to
10 apply a label to said pack dependent on said pack dimension and giving instructions to a labelling station, said instructions including said patient-specific information and an instruction for determining how a label applicator is to apply a label to a pack.

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33. An automated pharmaceutical dispensing system comprising:

a selecting and retrieving subsystem for selecting and retrieving a pharmaceutical pack, said
20 selecting and retrieving subsystem being arranged to deliver said pack to a labelling station, said labelling station comprising:

a label printer arranged to print a label comprising information specific to a patient for whom
25 said pharmaceutical pack is intended; and

a label applicator subsystem for applying said label to said pack;

the system further comprising a delivery subsystem for delivering said pack from the labelling station to a
30 user-accessible point.

34. A system as claimed in claim 33 wherein the label applicator subsystem is adapted to alter the way in which the label is applied depending upon a dimension of
35 the pack to be labelled.

35. A system as claimed in claim 34 arranged such that

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the labelling station applies the label in an orientation relative to the pack which is dependent upon at least one dimension of the pack.

5 36. A system as claimed in claim 35 wherein the labelling station is arranged to orient the pack and label applicator appropriately.

10 37. A system as claimed in claim 36 wherein the label applicator is arranged to adjust its own orientation.

15 38. A system as claimed in claim 33 wherein the label applicator is adapted to apply the label onto the pack in at least two discrete planes.

39. A system as claimed in claim 33 wherein the labelling station is adapted to receive an instruction as to how the label is to be applied.

20 40. A system as claimed in claim 33 wherein the label applicator is arranged to apply the label at a predetermined position on the pack, the position being variable from one pack type to another.

25 41. A system as claimed in claim 40 arranged to pass information to the labelling station to enable the label applicator to apply the label in the predetermined position.

30 42. A system as claimed in claim 33 arranged to pass label positioning information directly to the labelling station.

35 43. A system as claimed in claim 33 arranged to apply a label of common size to all packs.

44. A labelling apparatus comprising a label printer

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for printing a label and a label applicator adapted to apply said label to an object in at least two discrete planes.

- 5 45. A stock retrieval and labelling system comprising:
 a retrieval subsystem for retrieving an item of
stock in accordance with an order therefor;
 a label printer for printing a label for said item
with information specific to said order;
10 a label applicator for applying said label to said
item; and
 a control subsystem in data communication with said
retrieval subsystem and said label applicator subsystem,
said control subsystem being arranged to coordinate
15 retrieval of said item and application of said label
thereto.
46. A system as claimed in claim 45 wherein the label
applicator is adapted to alter the way in which the
20 label is applied depending upon a dimension of the pack
to be labelled.
47. A system as claimed in claim 46 arranged such that
the label applicator applies the label in an orientation
25 relative to the pack which is dependent upon at least
one dimension of the pack.
48. A system as claimed in claim 47 wherein the label
applicator subsystem is arranged to orient the pack and
30 label applicator relative to one another.
49. A system as claimed in claim 48 wherein the label
applicator is arranged to adjust its own orientation.
- 35 50. A system as claimed in claim 45 wherein the label
applicator is adapted to apply the label onto the pack
in at least two discrete planes.

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51. A system as claimed in claim 45 wherein the labelling station is adapted to receive an instruction as to how the label is to be applied.

5 52. A system as claimed in claim 45 wherein the label applicator is arranged to apply the label at a predetermined position on the pack, the position being variable from one pack type to another.

10 53. A system as claimed in claim 52 arranged to pass information to the label applicator to enable it to apply the label in the predetermined position.

15 54. A system as claimed in claim 45 arranged to pass label positioning information directly to the labelling station.

20 55. A labelling station for applying a label to any of a plurality of different packs comprising a dimension determination subsystem for determining at least one dimension of a pack to be labelled and a label applicator subsystem for applying a label to a pack in an orientation dependent upon said determined dimension.

25 56. A labelling station as claimed in claim 55 wherein the label applicator is configured to be able to apply said label onto said pack in at least two discrete planes.

30 57. A computer software product for enabling automatic labelling of a pharmaceutical pack with patient-specific information, comprising logic for processing a plurality of orders, each order comprising at least one piece of patient-specific information and a required drug, logic
35 for accessing a database referenced to said required drug for determining at least one dimension of a pack in which the drug is packaged, logic for determining how to

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5 apply a label to said pack dependent on said pack dimension and logic for giving instructions to a labelling station, said instructions including said patient-specific information and an instruction for determining how a label applicator is to apply a label to a pack.

10 58. A software product as claimed in claim 57 wherein said instructions for determining how the label is to be applied comprise a code for determining an orientation in which the label is to be applied.

15 59. A system for executing a computer software product as claimed in claim 57 comprising an existing pharmacy information technology system comprising a patient database, said information technology system generating a prescription request; a robot arm subsystem including an inventory database recording the position, size and entry date of each pharmaceutical pack as well as
20 controlling movement of the robot arm; and a labelling subsystem which sits between said information technology system and said robot arm subsystem and controls the printing and application of labels.

25 60. Software for execution on a server or plurality of servers, comprising logic for receiving an order, said order comprising at least one piece of patient-specific information and a required drug, logic for interrogating a database referenced to said required drug and for
30 receiving therefrom a determination relating to at least one dimension of a pack in which the drug is packaged, and logic for giving instructions to a labelling station, said instructions including said patient-specific information and information or instructions
35 based on said pack dimension determination for determining how to apply a label to said pack.

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61. A computer software product adapted, when run on suitable data processing means, to receive a message indicating delivery of a pack to be labelled to a labelling station and to transmit a message to said labelling station for applying a label to said pack such that said software is able to coordinate the delivery of said pack and the application of a particular label thereto.

62. A method of operating an automated pharmaceutical dispensing system comprising the steps of:
selecting and retrieving a pharmaceutical pack;
delivering said pack to a labelling station, said labelling station comprising a label printer and a label applicator;
said label printer printing a label comprising information specific to a patient for whom said pharmaceutical pack is intended;
said label applicator applying said label to said pack; and
delivering said pack from the labelling station to a user-accessible point.

63. A method as claimed in claim 62 comprising the step of altering the way in which the label is applied by the label applicator depending upon a dimension of the pack being labelled.

64. A method as claimed in claim 62 comprising the step of the labelling station applying the label in an orientation relative to the pack which is dependent upon at least one dimension of the pack.

65. A method as claimed in claim 62 comprising the step of the labelling station orienting the pack and label applicator appropriately.

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66. A method as claimed in claim 62 comprising the step of the label applicator adjusting its own orientation.

5 67. A method as claimed in claim 62 comprising the step of the label applicator applying the label onto the pack in at least two discrete planes.

10 68. A method as claimed in claim 62 comprising the step of the labelling station receiving an instruction as to how the label is to be applied.

15 69. A method as claimed in claim 62 comprising the step of the label applicator applying the label at a predetermined position on the pack, the position being variable from one pack type to another.

20 70. A method as claimed in claim 62 comprising the step of passing information to the labelling station to enable the label applicator to apply the label in the predetermined position.

71. A method as claimed in claim 62 comprising the step of applying a label of common size to all packs.

25 72. A method of automatically labelling a pharmaceutical pack with patient-specific information, comprising processing a plurality of orders, each order comprising at least one piece of patient-specific information and a required drug, accessing a database
30 referenced to said required drug for determining at least one dimension of a pack in which the drug is packaged, determining how to apply a label to said pack dependent on said pack dimension and giving instructions to a labelling station, said instructions including said
35 patient-specific information and an instruction for determining how a label applicator is to apply a label to a pack.

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73. A method of operating an automated pharmacy comprising the steps of: receiving a message indicating delivery of a pack to be labelled to a labelling station and transmitting a message to said labelling station for
5 applying a label to said pack thereby coordinating the delivery of said pack and the application of a particular label thereto.

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